***Complete this assignment in your notebook!***

***CW/HW#88: Classifying Quadrilaterals***

Geometry

Due: March 1st, 2016

Failure to complete the handout in its entirety will result in a LaSalle.

1. Copy the following into your notebook:

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| **~DEFINITIONS~**  https://encrypted-tbn1.gstatic.com/images?q=tbn:ANd9GcRJW-19I5b2Ken8elNqjlFnGkrRBugHSoMLLtLkUuFbZsUjr1FU   1. A quadrilateral is a four-sided polygon.   Example: ABCD   1. Opposite angles do not share a side.   Example:  Create your own example using the figure.   1. Opposite sides do not share a vertex.   Example:  Create your own example using the figure.   1. Adjacent sides share a vertex   Example:  Create your own example using the figure.   1. Consecutive angles share a side   Example:  Create your own example using the figure.   1. A diagonal is a line segment connecting two-non-adjacent vertices in a polygon.   Example:  Create your own example using the figure. |

2. Create the following table in your notebook. Use the handout to complete the properties.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Quadrilateral**  **INCLUDE A PICTURE** | **Side Properties** | **Angle Properties** | **Diagonals Property** | **Area**  **(Leave blank- added later)** |
| **Parallelogram** |  |  |  |  |
| **Rhombus** |  |  |  |  |
| **Rectangle** |  |  |  |  |
| **Square** |  |  |  |  |
| **Kite** |  |  |  |  |
| **Trapezoid** |  |  |  |  |
| **Isosceles Trapezoid** |  |  |  |  |

***Use these notes to complete the charts in your notebook!***

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| 1) **Parallelogram**   1. The opposite sides are parallel 2. The opposite sides are congruent 3. The opposite angles are congruent 4. The diagonals bisect each other 5. All consecutive angles are supplementary |
| 2) **Rectangle**   1. All properties of a parallelogram apply to rectangle 2. All angles are right angles 3. The diagonals are congruent |
| 3) **Kite**   1. Two pairs of consecutive sides are congruent 2. The diagonals are perpendicular 3. One diagonal is perpendicular bisector of the other 4. One pair of opposite angles are congruent |
| 4) **Rhombus**   1. All the properties of a parallelogram applies to rhombus 2. All the sides are congruent, (rhombus is equilateral) 3. The diagonals bisect the angles 4. The diagonals are perpendicular bisectors of each other 5. The diagonals divide the rhombus into 4 congruent right triangles |
| 5) **Square**   1. All properties of a rectangle apply to square 2. All properties of rhombus apply by to square 3. The diagonals form four isosceles right triangle |
| 6) **Isosceles Trapezoid**   1. The legs are congruent by definition 2. The bases are parallel 3. The upper base angels are congruent 4. The lower base angles are congruent 5. The diagonals are congruent 6. Any lower base angle is supplementary to any upper base angle |